

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8065 - L2 Version 2  
Chandra X-Ray Center

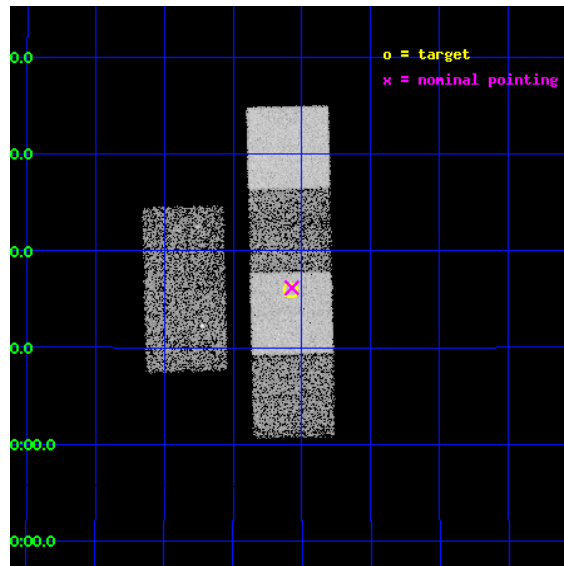
L2 Processing Date : May 9 2012

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# 1 Front

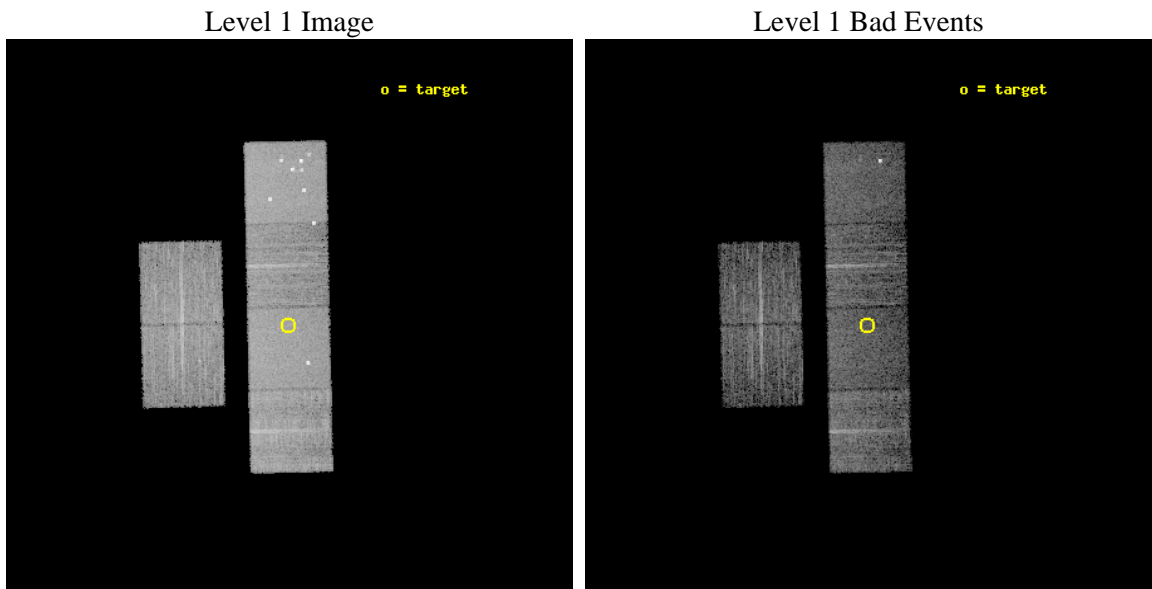
seq_num	900606	Sequence number
obs_id	8065	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1475	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.270833	Observer's specified target RA [deg]
dec_targ	16.265528	Observer's specified target Dec [deg]
ra_nom	188.26825873116	Nominal RA [deg]
dec_nom	16.269684625711	Nominal Dec [deg]
roll_nom	88.771993813335	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5157.1733691692	Sum of GTIs [s]
livetime	5091.8701346918	Livetime [s]
ontime2	5157.2144091725	Sum of GTIs [s]
ontime3	5157.0502591133	Sum of GTIs [s]
ontime5	5157.1323291659	Sum of GTIs [s]
ontime6	5157.0912991166	Sum of GTIs [s]
ontime7	5157.1733691692	Sum of GTIs [s]
ontime8	5150.527148664	Sum of GTIs [s]
l2events	80695	Number of level 2 events



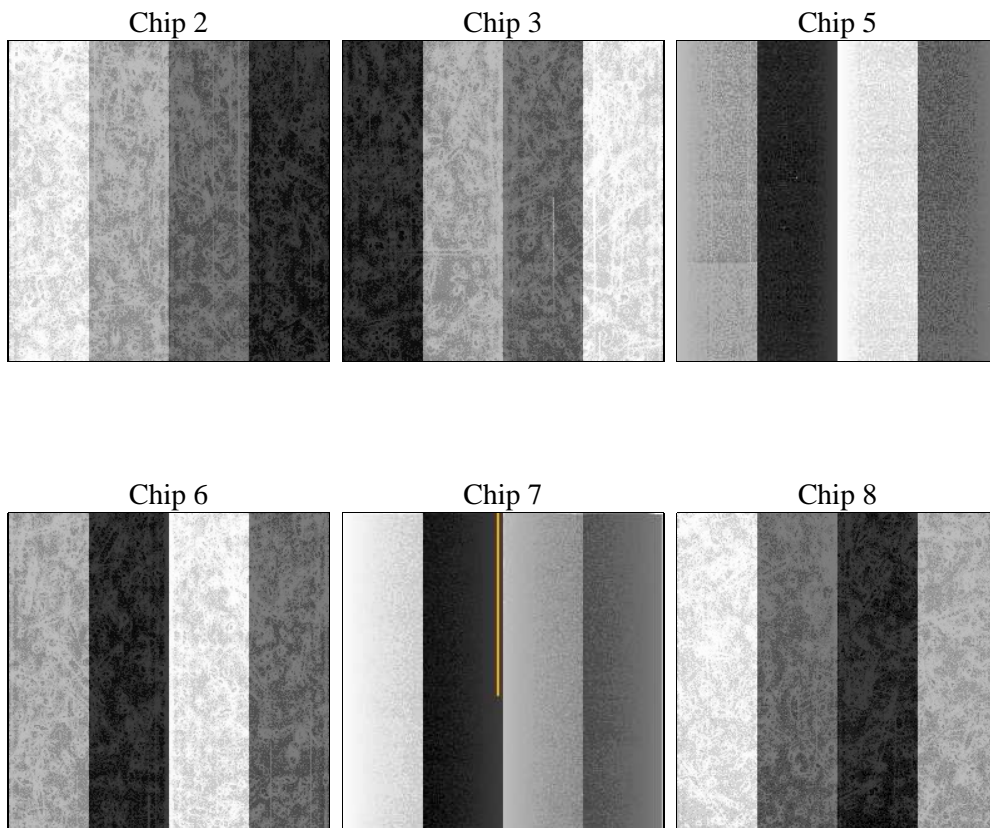
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5157.1733691692	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5157.2144091725	Sum of GTIs [s]
date	2012-05-09T18:38:15	Date and time of file creation	ontime3	5157.0502591133	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5157.1323291659	Sum of GTIs [s]
			ontime6	5157.0912991166	Sum of GTIs [s]
			ontime7	5157.1733691692	Sum of GTIs [s]
			ontime8	5150.527148664	Sum of GTIs [s]
			l1events	369085	Number of level 1 events

### 2.1.4 Events

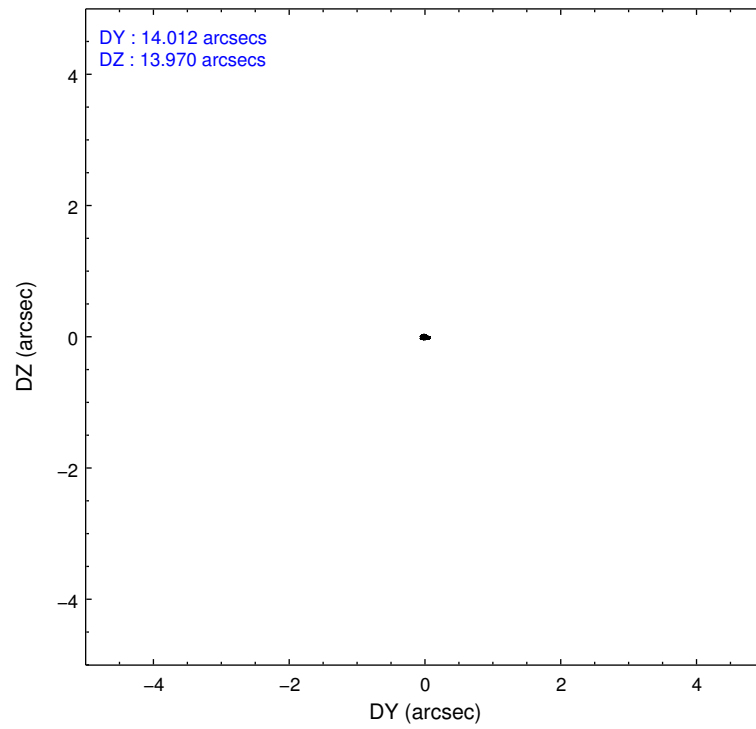
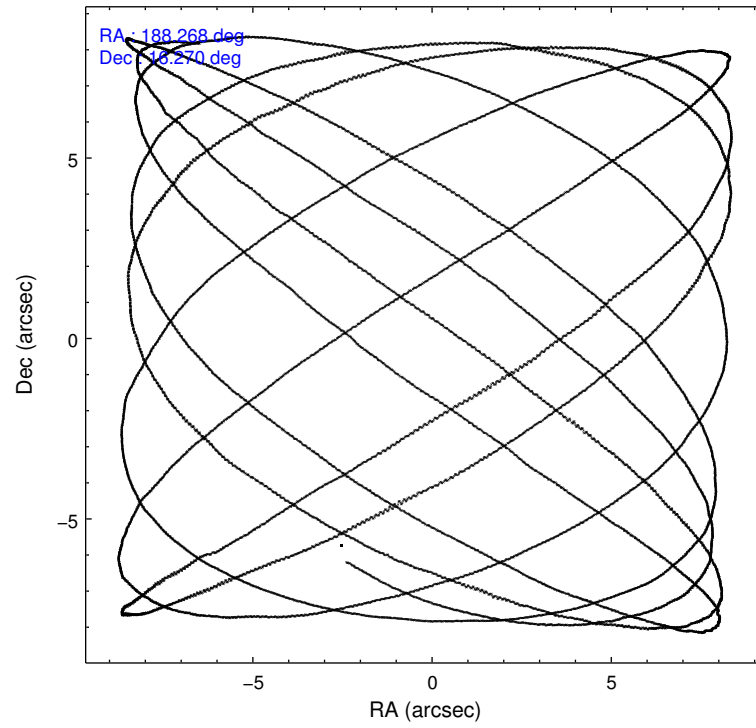
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	50834	48713	83684	50330	69109	66415	grade 0 events	2396	2672	7648	2361	4013	4361
rejected events	45243	42698	42300	44153	39681	52418		4%	5%	9%	4%	5%	6%
rejected %	89%	87%	50%	87%	57%	78%	grade 1 events	29	29	105	38	74	66
								0%	0%	0%	0%	0%	0%
							grade 2 events	1212	1156	11395	1404	5676	3096
								2%	2%	13%	2%	8%	4%
							grade 3 events	494	593	1209	567	2307	1438
								0%	1%	1%	1%	3%	2%
							grade 4 events	499	542	1051	573	2245	1301
								0%	1%	1%	1%	3%	1%
							grade 5 events	1838	2206	5125	2233	6141	3139
								3%	4%	6%	4%	8%	4%
							grade 6 events	995	1058	20149	1276	15225	3816
								1%	2%	24%	2%	22%	5%
							grade 7 events	43371	40457	37002	41878	33428	49198
								85%	83%	44%	83%	48%	74%

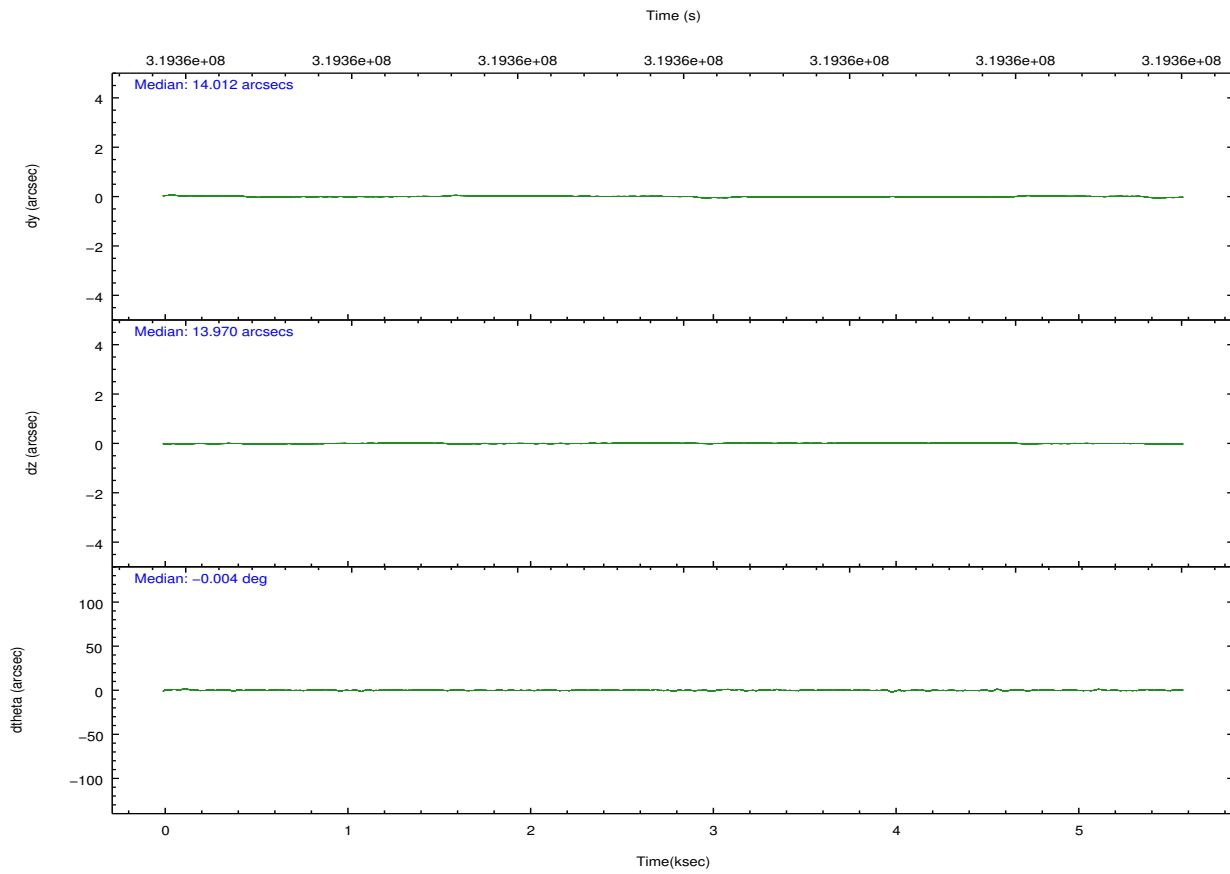
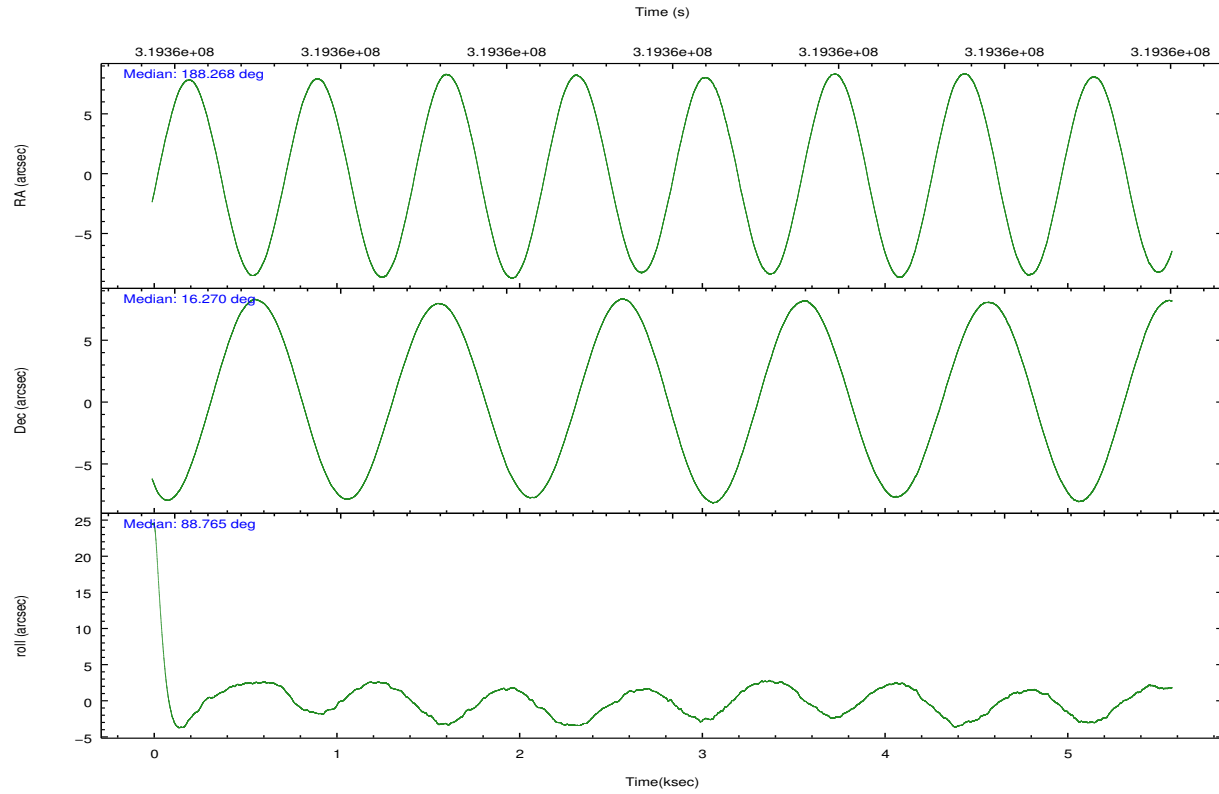


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	188.282319	188.2682587311605	CCD I2 on	O1	Y
[deg] Pointing Dec	16.245929	16.26968462571065	CCD I3 on	O2	Y
[deg] Pointing Roll	88.611425	88.7719938133348	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O4	Y
[s] Observation start time (MET)	319357321.184000	319356802.65078	CCD S5 on	N	N
Observation start date	2008-02-14T06:20:56	2008-02-14T06:13:22	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	319362721.184000	319362929.07608	On-chip summing requested	N	N
Observation end date	2008-02-14T07:50:56	2008-02-14T07:55:29	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



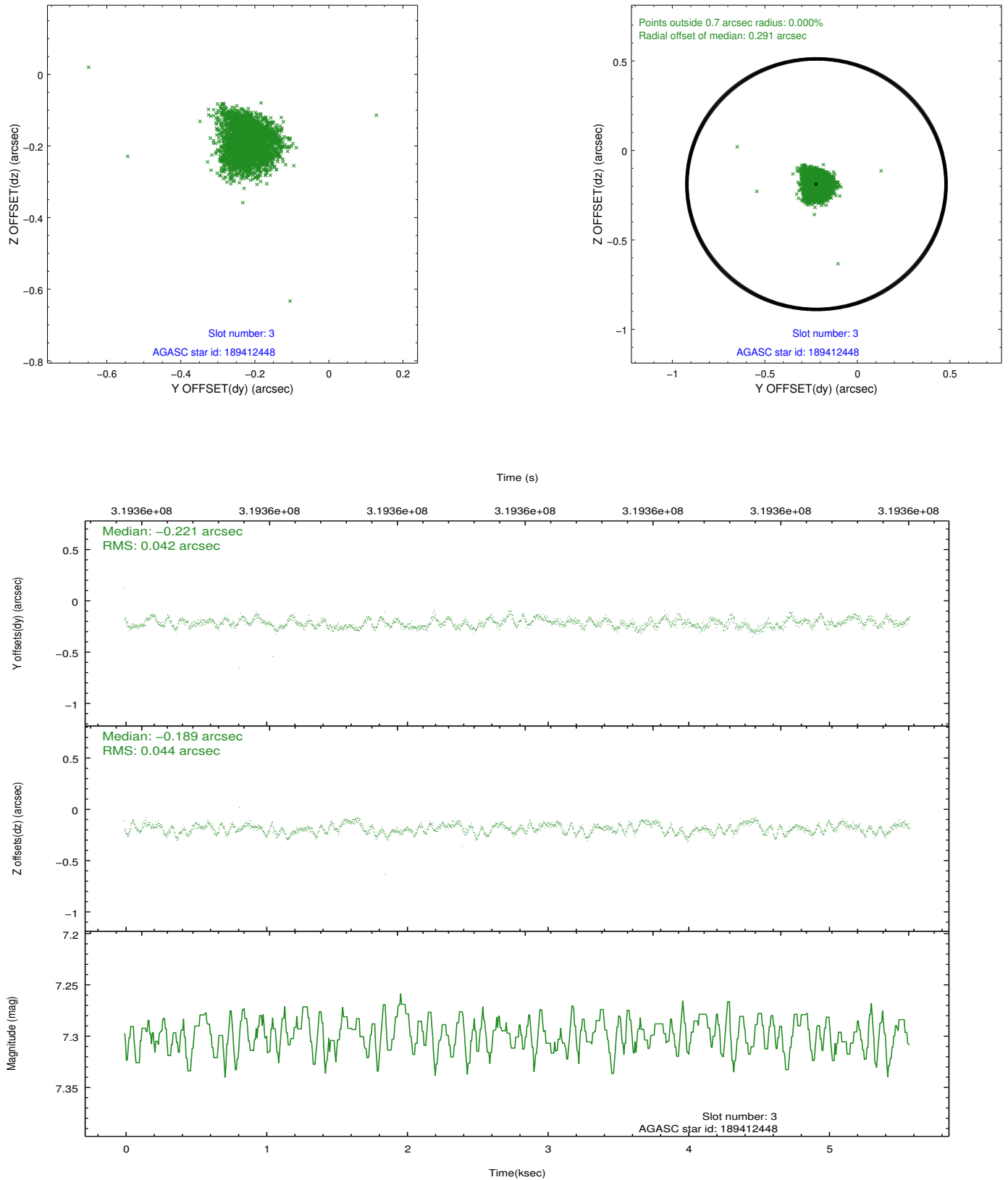


### Slot Statistics

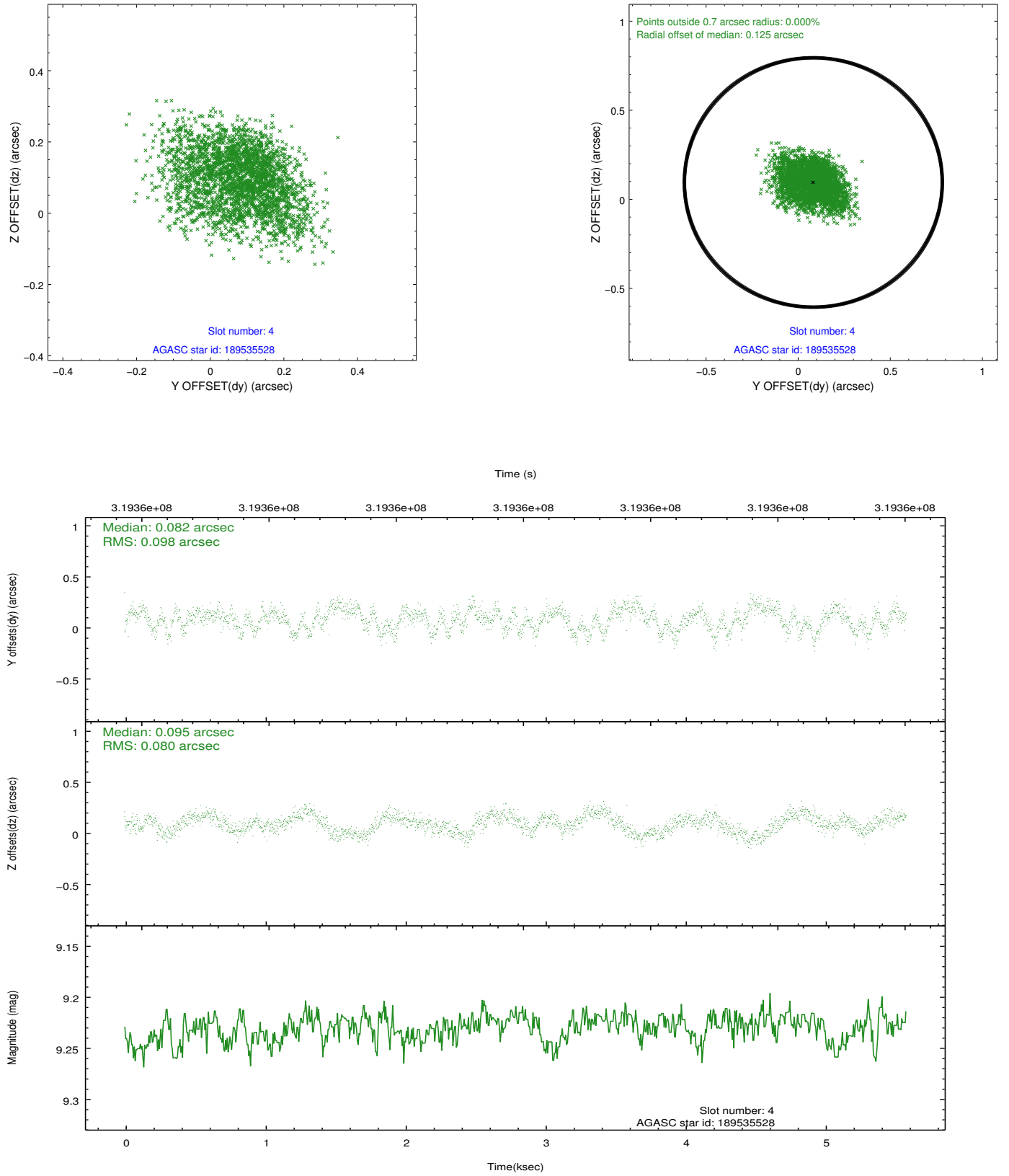
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	1362	-0.061	-0.062	0.006	0.011	0.000000	0.000000	-767.01	-1735.33
1	FID	ACIS-S-4	7.20	1362	0.192	0.046	0.006	0.013	0.000000	0.000000	2146.02	172.15
2	FID	ACIS-S-5	7.23	1362	-0.163	0.025	0.007	0.012	0.000000	0.000000	-1818.58	167.02
3	GUIDE	189412448	7.30	2724	-0.221	-0.189	0.064	0.098	187.776697	16.614118	1284.60	1775.93
4	GUIDE	189535528	9.23	2723	0.082	0.095	0.136	0.215	188.943906	16.829854	2161.48	-2226.88
5	GUIDE	189537728	9.33	2723	-0.000	-0.100	0.082	0.132	188.083246	16.538135	1036.35	711.59
6	GUIDE	189539160	7.67	2724	0.060	0.231	0.059	0.098	188.888395	15.636427	-2138.78	-2153.58
7	GUIDE	189414536	9.31	2720	0.080	-0.037	0.087	0.141	187.941558	15.891419	-1304.02	1147.70

## 2.4 Star Slots

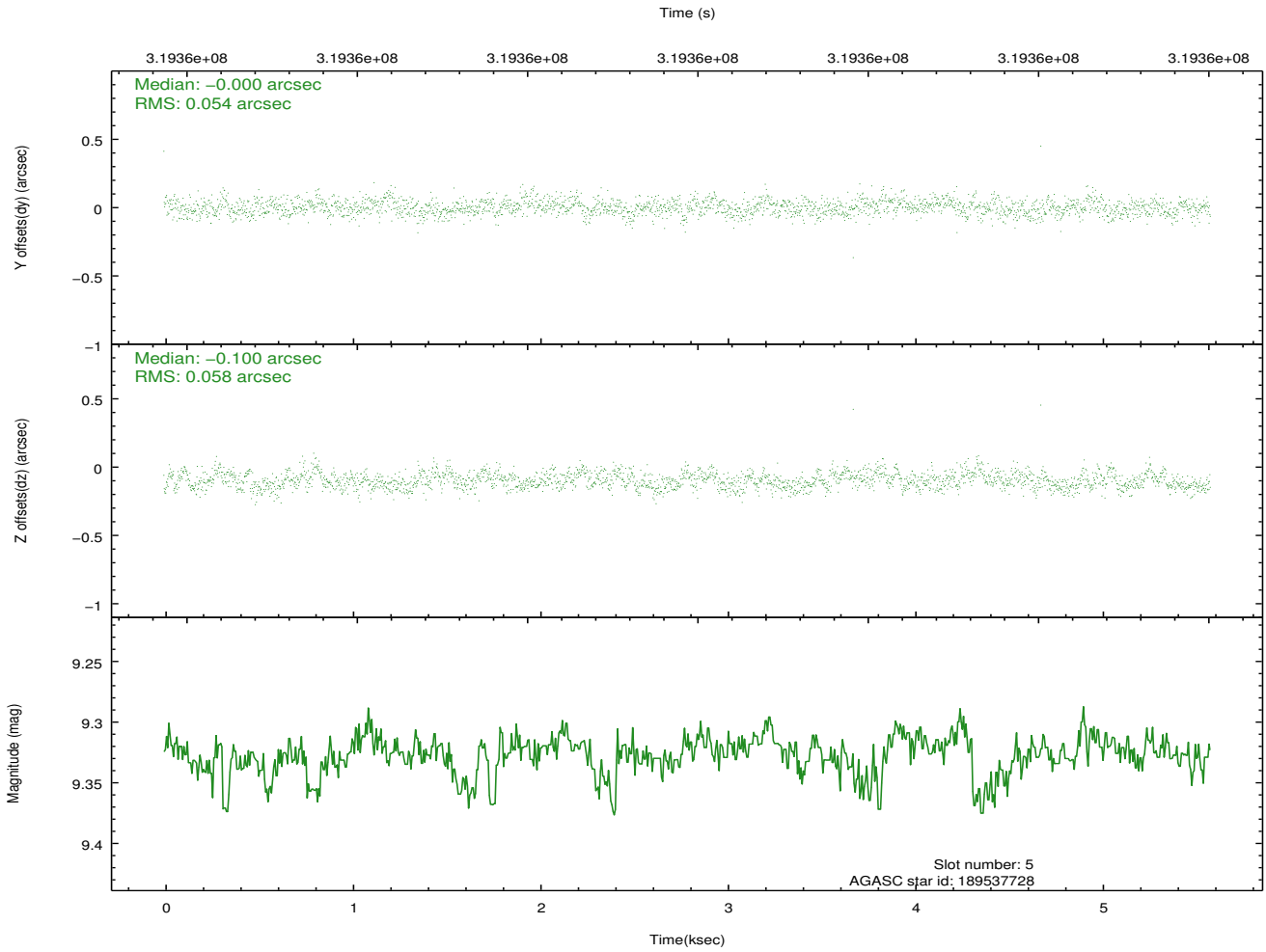
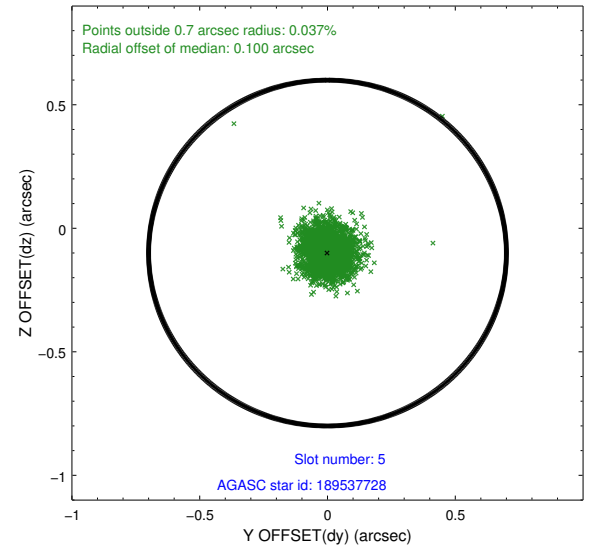
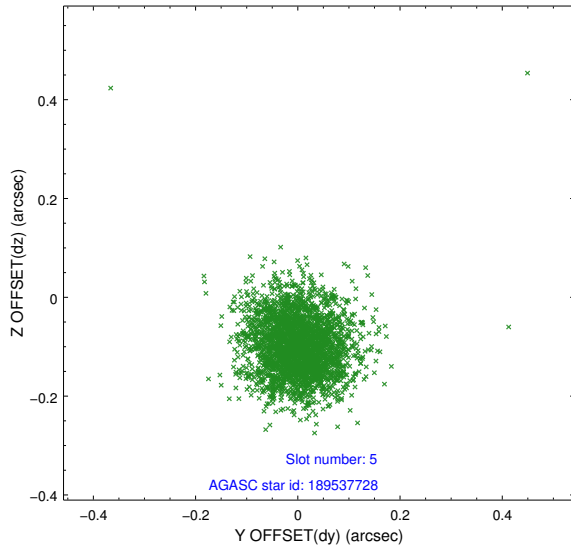
### 2.4.1 Slot 3



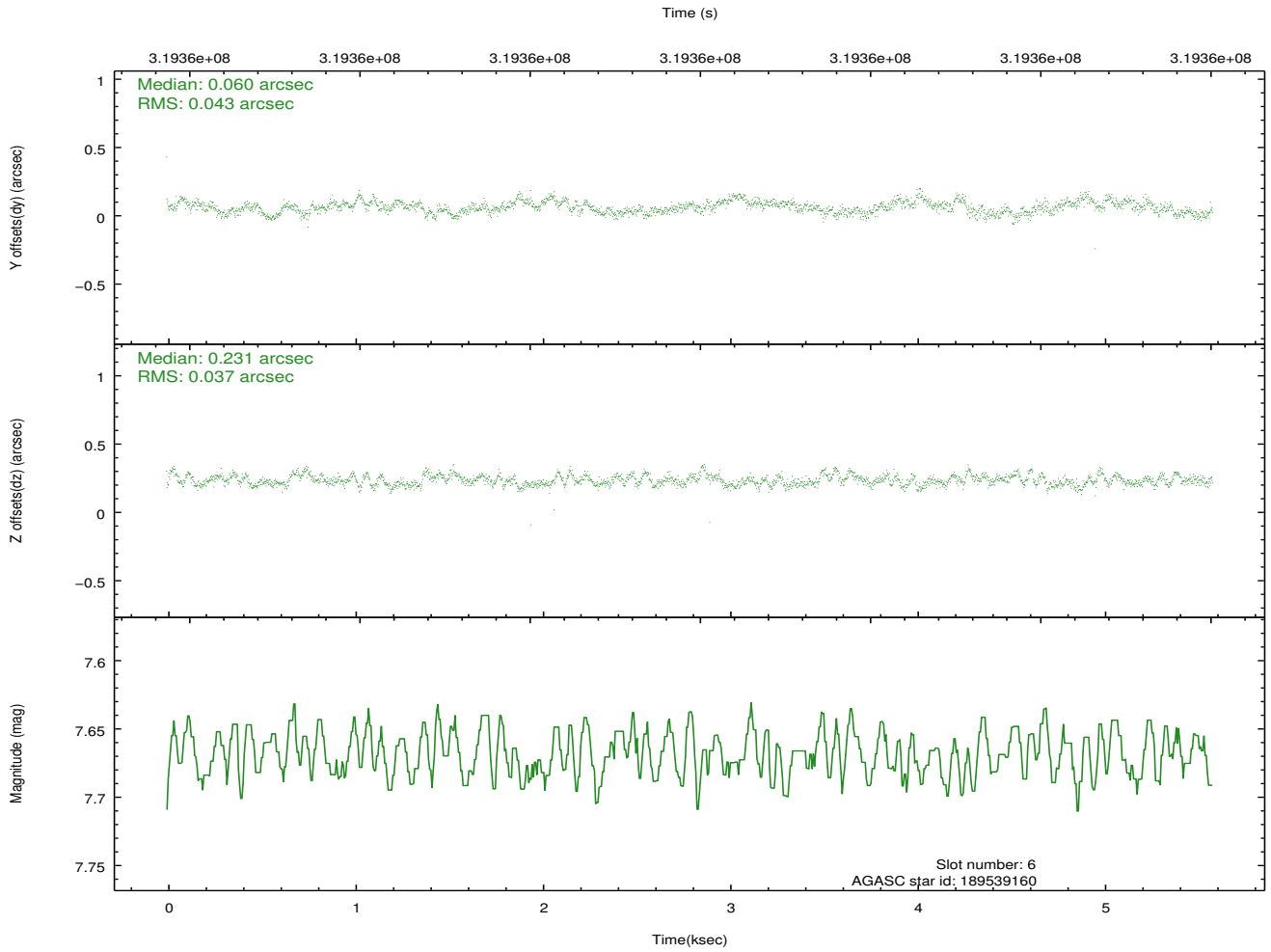
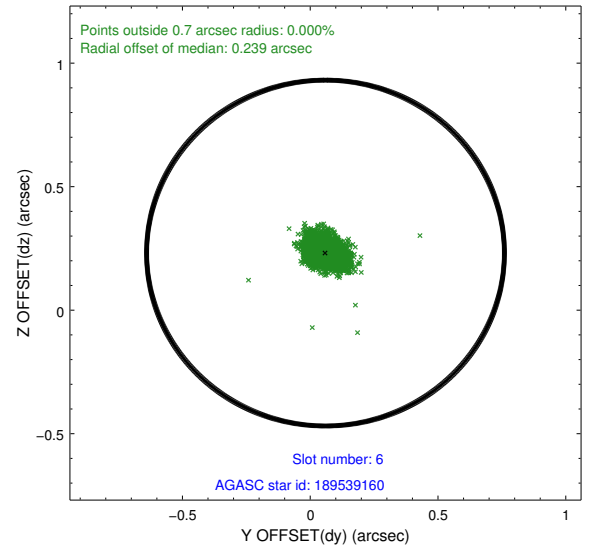
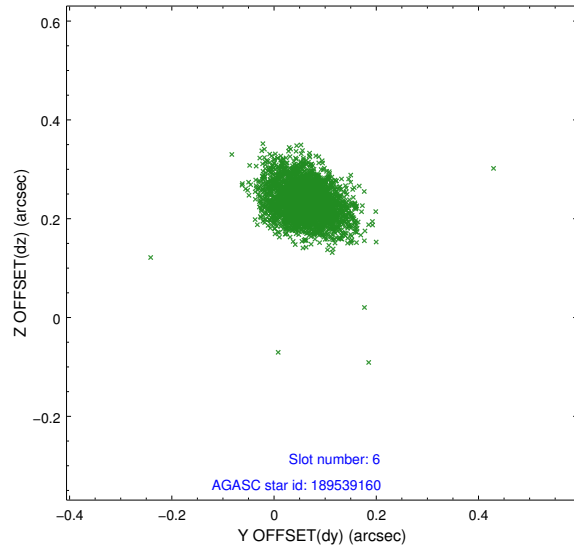
## 2.4.2 Slot 4



### 2.4.3 Slot 5

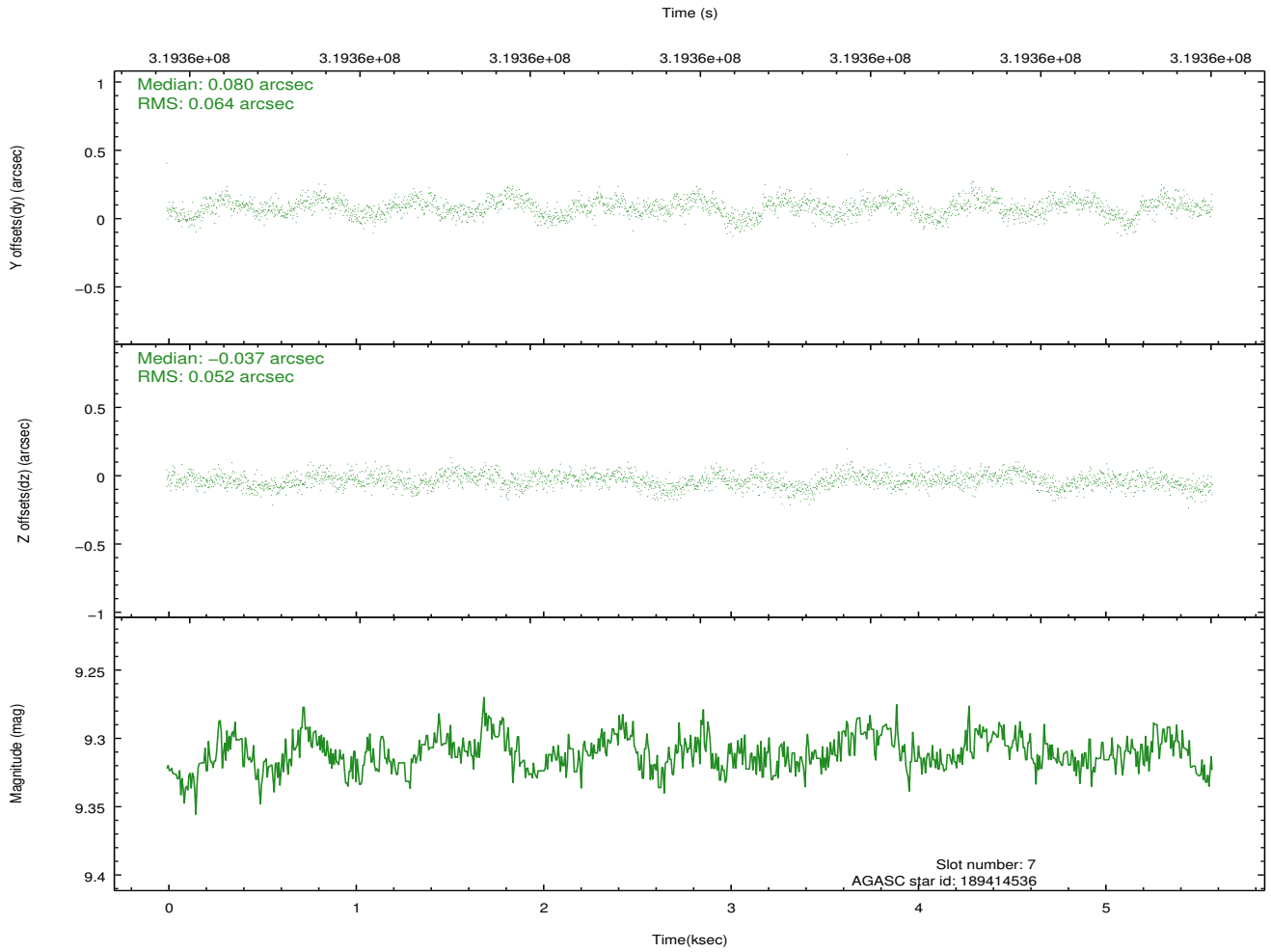
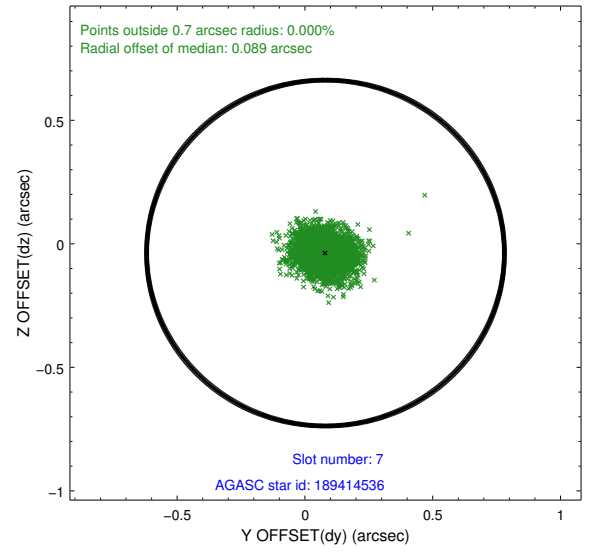
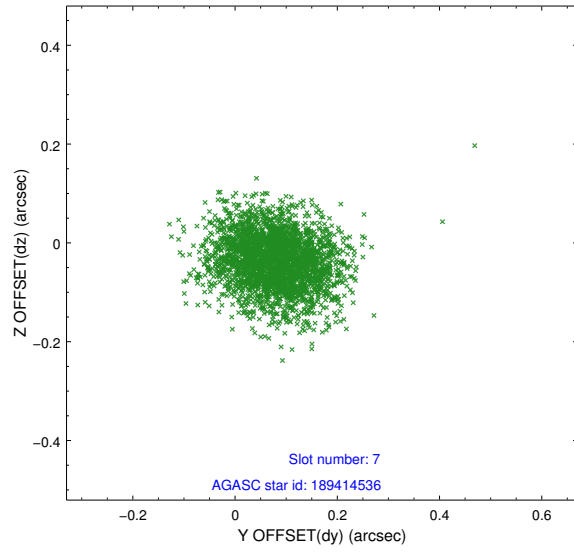


## 2.4.4 Slot 6



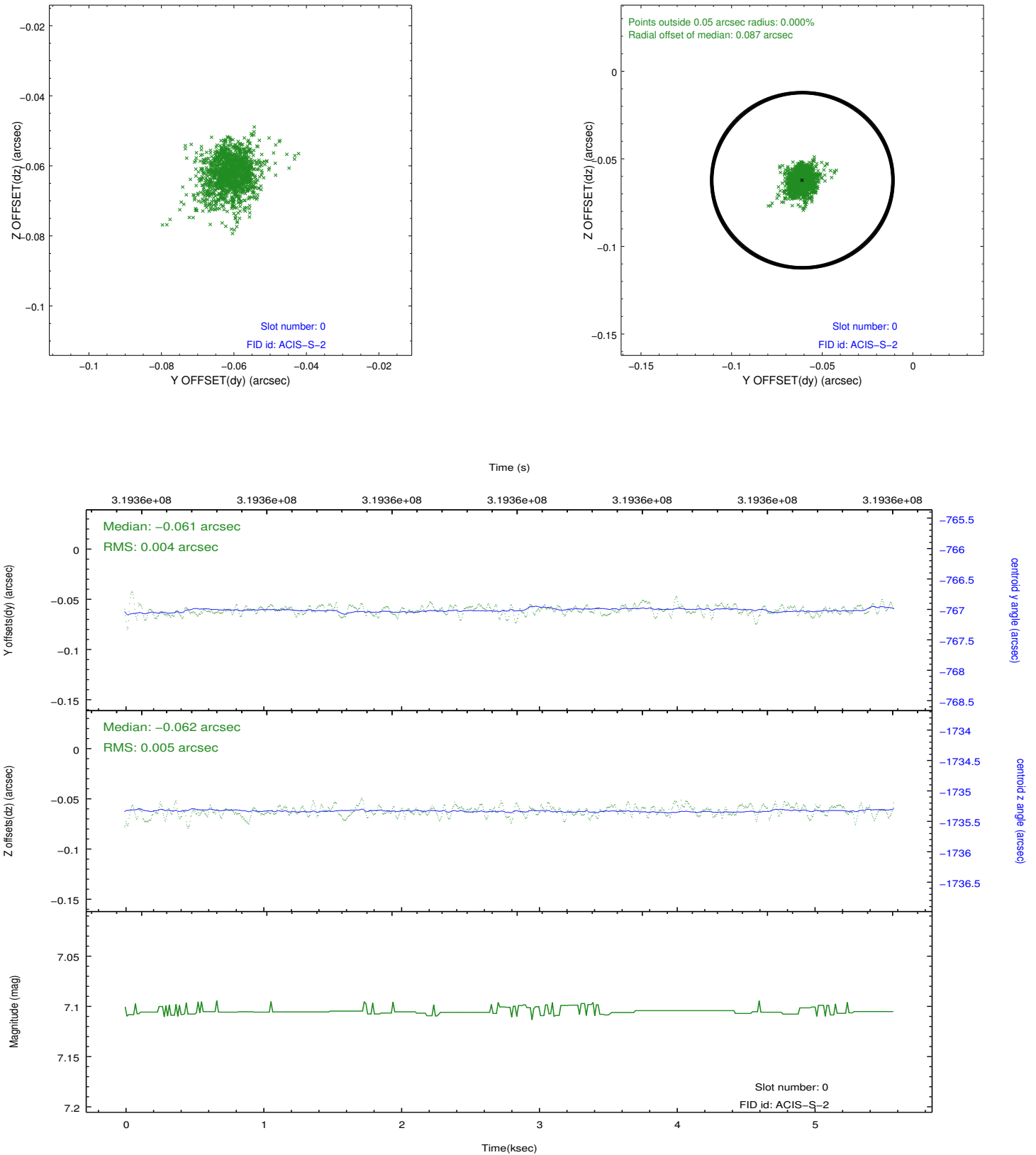


## 2.4.5 Slot 7

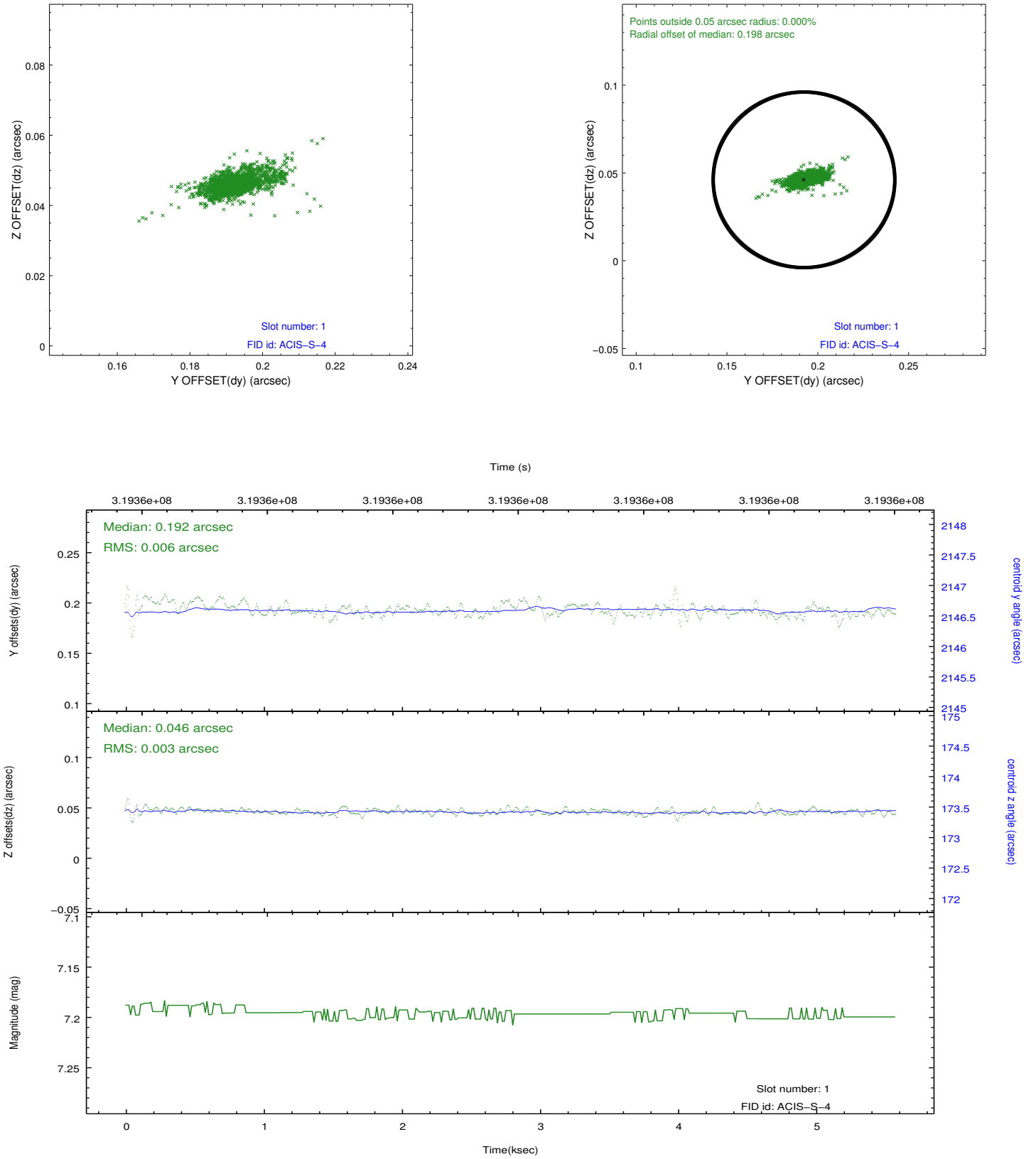


## 2.5 FID Slots

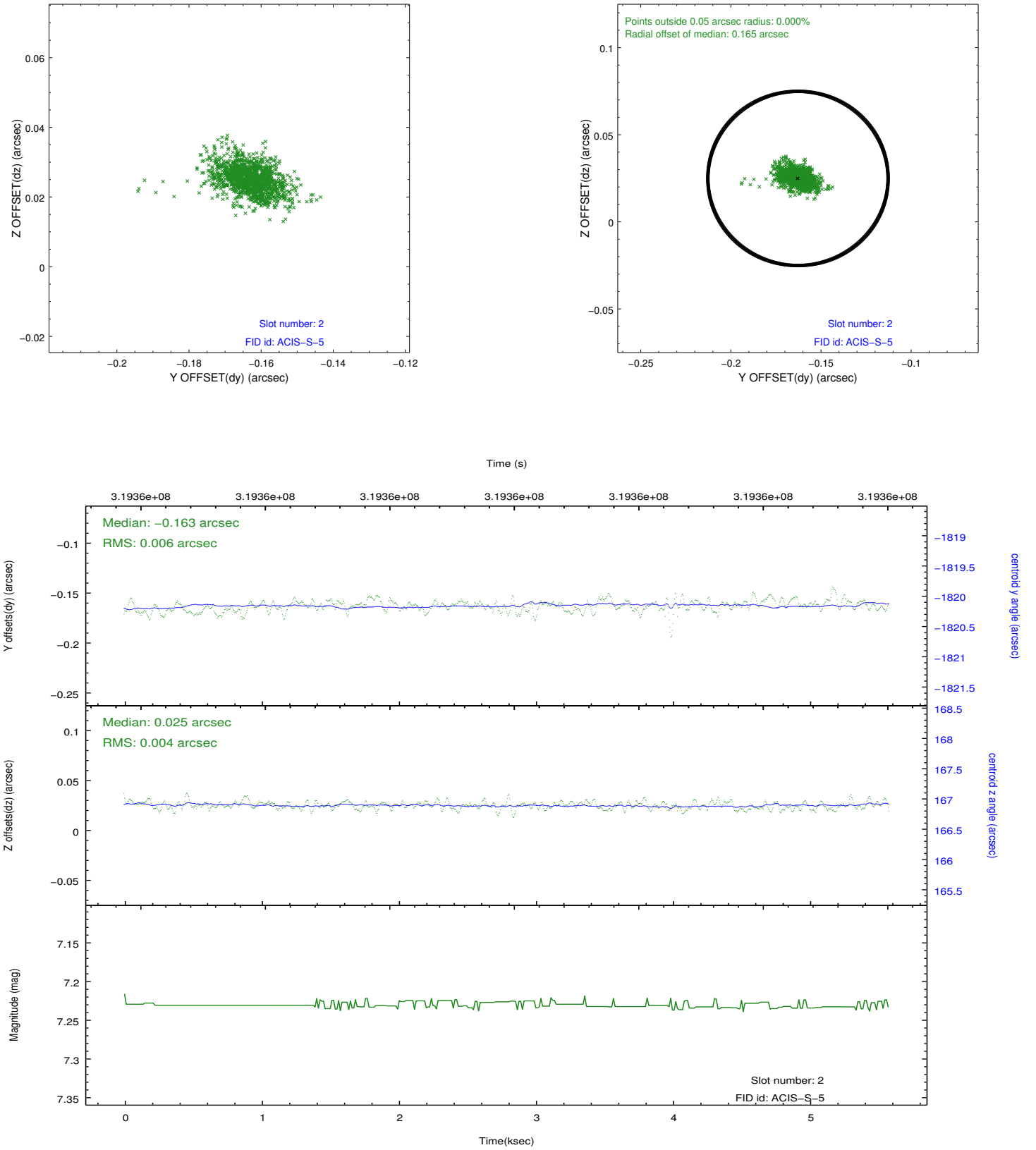
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.05.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

### A.2 Comments

Joint proposal: Spitzer